Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Per.: \_\_\_\_\_\_\_\_

**FINAL EXAM REVIEW – Basic Geometry Vocabulary**

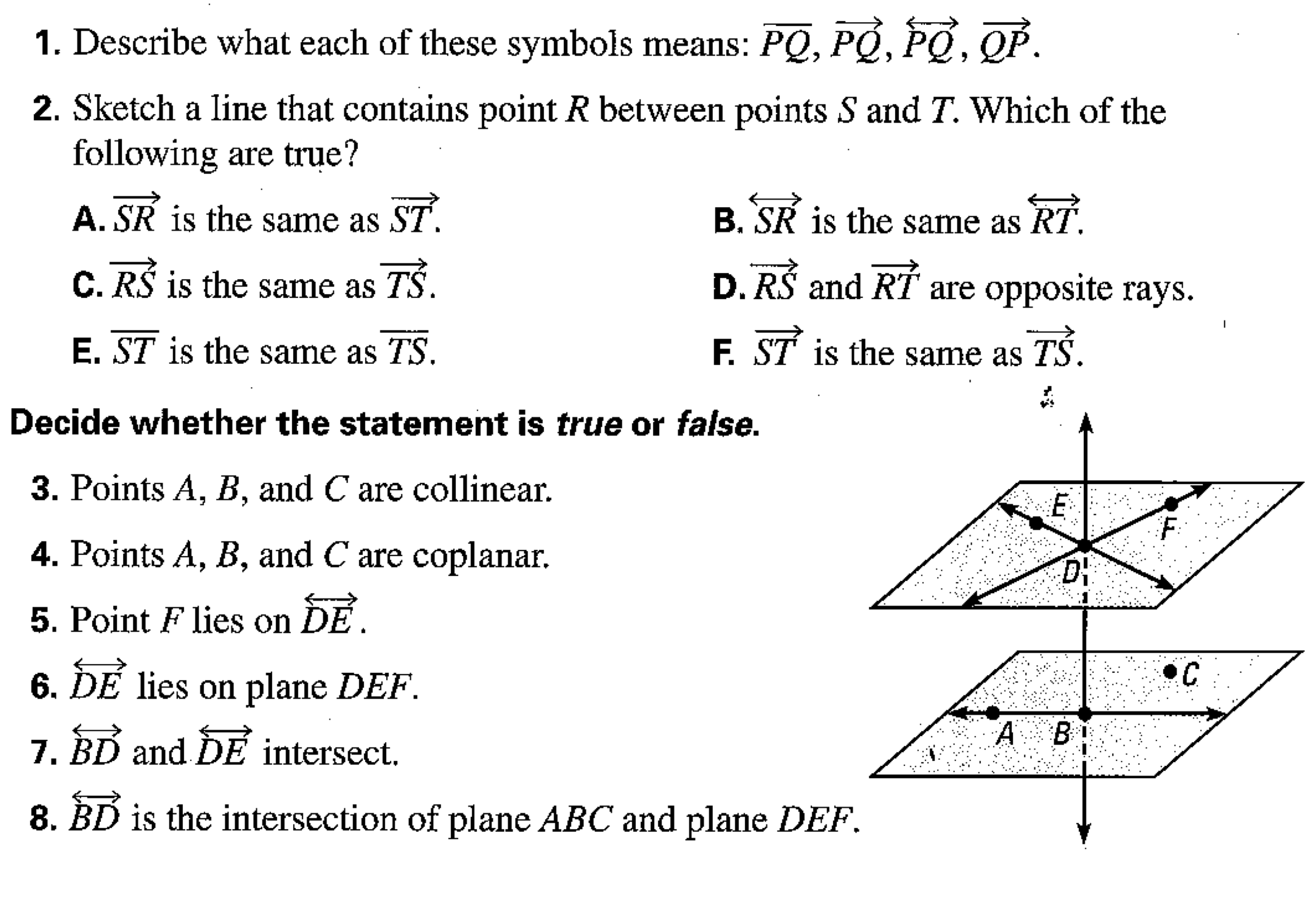
**Euclid**:

* the father of Geometry
* studied by Abraham Lincoln
* built an *axiomatic* system of Geometry
  + based on **axioms** – statements accepted as true
  + ex: A straight line segment can be drawn joining any two points.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Description** | **Figure** | **Symbol** |
| **point\*** | describes a location; zero dimensions |  | P or Point P |
|  |  |  |  |
| **line\*** | a collection of points along a straight path with no endpoints; one dimension (length) |  | or |
|  |  |  |  |
| **plane\*** | a flat surfaces that extends indefinitely; two dimensions (length and width) |  | Plane EFG or Plane *T* |
|  |  |  |  |
| **ray** | a collection of points along a straight path with one endpoint which extends indefinitely in one direction; one dimension (length) |  |  |
|  |  |  |  |
| **line segment** | a collection of points along a straight path with two endpoints; one dimension (length) \**measurable* |  | or |
|  |  |  |  |
| **angle** | two rays that meet at a point (this point is the **vertex**) \**measurable* |  |  |
|  |  |  |  |

\***undefined** terms of Geometry… MANY definitions have their roots in these three words

Directions: I HIGHLY recommend answering these on a separate sheet of paper.



**Short Answer:**

1. What are the undefined terms?

2. Why will two points ALWAYS be collinear? Why will three points always be coplanar?

3. In what way(s) was Euclid influential?

**FINAL EXAM REVIEW – Constructions**

**Perpendicular Bisector:** <http://www.mathopenref.com/constbisectline.html>

* + Given line segment AB
  + Draw circle A (this means the center is A) with radius AB OR Draw circle A with radius of over half of AB
  + Draw circle B (this means the center is B) with the same radius
  + Label the two intersection points C and D
  + Draw a line between C and D

**Angle Bisector:** <http://www.mathopenref.com/constbisectangle.html>

* + Set the compass to any width
  + Draw an arc with center A (vertex) (or draw a circle with center A) so that it intersects with both sides of the angle
  + Label the intersection points as B and C (these are the points where the arc intersected the angle)
  + Draw an arc with center B/draw a circle with center B
  + Draw an arc with center C with the compass set to the same width (set to the same radius)
  + Label the intersection point D
  + Draw a ray/line/line segment from A to D

**Equilateral Triangle**: <http://www.mathopenref.com/constequilateral.html>

* + Given line segment AB
  + Draw circle A with radius AB
  + Draw circle B with radius AB
  + Mark one intersection point of the circles as C
  + Create line segments AC and BC

**WHY DO THEY WORK?**

|  |  |  |
| --- | --- | --- |
|  |  |  |

You can do these on a separate sheet of paper by drawing a line segment with a straight edge.

1. Construct the perpendicular bisector of . When complete, mark the congruent segments and right angles.

2. Construct an equilateral triangle.

3. How does the construction of an equilateral triangle ensure that all sides are congruent?

4. How does the construction of an angle bisector ensure that two congruent angles are created?

\*\* a similar question regarding perpendicular bisectors will be later in the review \*\*